The Status of Utility Demand-Side Management Activities in South Carolina for 2000

A report to
the South Carolina General Assembly
prepared by
the South Carolina Energy Office
of the State Budget and Control Board
Legal Services and Grants Division
in cooperation with
the South Carolina Public Service Commission

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EXECUTIVE SUMMARY

INTRODUCTION

This report summarizes demand-side management (DSM) activities for electric and natural gas utilities in South Carolina for 2000. Two basic themes emerge: (1) savings from demand-side management programs have declined substantially in the past few years, and are not projected to change much in the next five years, and (2) there is significant variation among the utilities in the degree to which they participate in demand-side activities.

PURPOSE OF REPORT

The purpose of this report is to describe demand-side options for meeting energy needs in South Carolina, with the hope of encouraging further implementation of demand-side management practices. Demand-side management refers to the use of cost-effective conservation, efficiency, and load management in order to reduce the demand for and cost of energy services. Demand-side management is a resource option that complements power supply. It not only saves customers money, but also helps utilities reduce pollution and avoid more costly supply-side investments. Demand-side activities are used to reshape energy use and demand, thus providing an important component of the energy resource mix. These activities are intended not only to delay the expense of power plant construction, but also to reduce air-polluting emissions and expenditures for fuel.

FINDINGS

Submittals were received from all 46 electric utilities operating in South Carolina. Data was received from 17 of the 19 natural gas suppliers operating in the state.

Electricity

The demand for electricity in South Carolina is projected to grow more than 16 percent over the next five years, or about 3 percent annually. Utilities can take both supply- and demand-side approaches to meet this growth in demand. There are two basic goals of demand-side activities: reducing the peak demand for electricity; and reducing the overall amount of energy used.

Reductions in Peak Electricity Demand

Statewide peak demand in 2000 was 14,975 megawatts (MW). Demand-side management reduced peak demand for this year by 4.3 percent, or 677 MW, equivalent to reducing the need for the capacity of more than eight 80 MW combustion turbines.

Application of DSM peak reduction principles by the utilities varies markedly. In 2000, Progress Energy (formerly Carolina Power & Light) and Duke Energy (Duke) used demand-side management to reduce their peak demand by about 10.5 percent and 7.5 percent respectively. The other utilities reported that they achieved less.

Reductions in Electricity Consumption

About 77.1 million MWh of electricity was used in 2000, at an expense to South Carolinians of almost $6 billion. Demand-side activities reduced this total consumption figure by 0.28 million MWh, equivalent to about $22 million in utility bill savings for consumers. This 0.36 percent savings represents just over two-tenths of the 2000 national average of 1.6 percent reduction of consumption through demand-side management. The contribution of demand-side activities to the reduction of electricity consumption is projected to increase by 19.6 percent by 2004 in South Carolina.

Qualified Facilities

Qualified facilities include industrial cogenerators and independent power producers using renewable fuel sources. They currently have the capacity to provide about 442 MW of power, potentially meeting about 3 percent of system peak demand. Duke Energy added a large cogeneration facility in Cherokee County in 1998. This facility increased the contribution from qualified facilities in the state.

Natural Gas

There are two categories of demand-side activities for natural gas: (1) conservation; and (2) load management programs. During 2000, reported reduction in peak demand through demand-side management was 3,251 dekatherms (DT). Annual consumption was reduced by 18,711 DT, about .01 percent. These numbers are small as most activities were focused on load building programs. Natural gas utilities project that demand-side management activities will remain constant over the next five years.

CONCLUSION

DSM programs cut peak load by 4.3 percent in 2000 and this percentage is expected to increase slightly over the next five years. Duke and Progress Energy are the most active participants in demand-side management, but there is considerable variation among South Carolina utilities in the degree to which they apply demand-side management.

Due in part to the pending restructuring of the power industry, the future of demand-side management activities by South Carolina utilities appears bleak. The result may be higher energy use, higher utility bills and increased air pollution.

THE STATUS OF UTILITY DEMAND-SIDE MANAGEMENT ACTIVITIES FOR 2000

This report provides demand-side information submitted by retail distributors of electricity and natural gas in South Carolina, including investor-owned utilities, Santee Cooper, electric cooperatives, and municipalities. The report includes actual data from calendar years 1996 through 2000, and projected data from 2001 through 2005.

Demand-side management refers to the use of cost-effective conservation, efficiency and load management in order to reduce the demand for and cost of energy services. Demand-side management is a resource option that complements power supply. It not only saves customers money, but also helps utilities minimize pollution and avoid more costly supply-side investments. Demand-side activities are used to reshape energy use and demand, thus providing an important component of the energy resource mix. These activities are intended to delay the expense of power plant construction, as well as to reduce air-polluting emissions and expenditures for fuel.

Demand-side programs are a clear alternative to supply-side options. For example, a utility may project additional demand of 300 MW. The utility can build a new generating plant (supply-side), or it can fund programs that will encourage customers to save 300 MW of energy (demand-side). The utility must determine which is cheaper: building and operating a new plant; or promoting efficiency. Each utility's long-range plan should provide for a mix of both cost-effective supply-side and demand-side options.

Two basic themes emerge from this year's report: (1) savings from demand-side management programs have declined substantially in the past few years and are not projected to change very much in the next five years, and (2) there is significant variation among SC utilities in the degree to which they participate in demand-side activities.

BACKGROUND

The South Carolina Energy Conservation and Efficiency Act of 1992 requires all utilities to report annually on demand-side activities. This is the ninth annual report on demand-side activities implemented by the suppliers of electricity and natural gas in South Carolina. This report was prepared by the South Carolina Energy Office in cooperation with the South Carolina Public Service Commission and meets the requirements of the South Carolina Code Section 58-37-30(A) & (B), as enacted by the South Carolina Energy Conservation and Efficiency Act of 1992.

The overall purpose of this report is to describe demand-side alternatives for meeting electric and gas needs in South Carolina, and to present that information to the people of the state, its elected officials and the utilities themselves, with the hope of encouraging further implementation of demand-side management practices.

The report presents compiled information on the status of demand-side activities throughout the state, as well as near-future projections. This information can be used for the following: assessing alternatives for satisfying the ever-increasing demands for power; discerning long-range air quality options; and statewide energy planning. Purposes of the report are further discussed in Appendix C.

FINDINGS

Retail suppliers of electricity or natural gas are required annually to submit information on each of their demand-side programs as both qualitative and quantitative data. A format was provided to each electric and natural gas supplier for data submission (see Appendix J for blank format and Appendix D for explanation).

Submittals were received from all 46 electric utilities operating in the state, including four investor-owned electric utilities, Santee Cooper, 20 electric cooperatives and 21 municipalities.

Data was received from 17 of the 19 natural gas suppliers operating in the state, including all four major suppliers. Of the 17, seven reported the existence of demand-side programs for residential, commercial or industrial customers, and nine reported no existing programs or plans for the implementation of such programs.

The names of the electricity and natural gas suppliers submitting data are provided in Appendix B.

Electricity

Peak demand for electricity in South Carolina is projected to grow more than 16 percent by 2005, while total electricity consumption is projected to rise almost 15 percent in the same period. Electric utilities can take both supply-side and demand-side approaches to meet this growth in demand.

On the supply side, utilities can increase the supply of electricity in one of three ways: by building new plants; increasing the output, efficiency and service life of existing plants; or purchasing electricity either from other utilities or from non-utility producers.

On the demand side, utilities can modify the demand for electricity through the use of various activities designed to cause consumers to change the timing of electricity use and the amount of electricity used.

Electric utilities have used demand-side activities for many years in South Carolina. Demand-side activities are designed to accomplish two general goals: (1) reducing the peak demand for electricity; and (2) reducing the overall amount of electricity used. The peak system demand is measured in megawatts (MW) and, in South Carolina, usually occurs during the late afternoons of summer months. Each distributor is responsible for providing as much power as needed to meet the peak demand on its system. In South Carolina, demand-side activities mainly reduce the peak power demand and, to a much lesser extent, the total amount of electricity that needs to be generated.

Reductions in Peak Electricity Demand

Figure 1 illustrates the distribution, by utility, of the annual system peak demand for South Carolina in 2000. All municipalities that distribute electricity are grouped together and shown as a single source. Similarly, all electric cooperatives are grouped as a single source. Investor-owned utilities and Santee Cooper are shown separately, as each represents a sizable portion of the distribution of electricity. The sum of these sources is the actual amount of the annual system peak demand for 2000, which was 14,975 MW, up 298 MW or about 2 percent over 1999.

The remaining slice of the chart represents the combined effects of all demand-side activities from each distributor in reducing the demand for electricity. In 2000, this amounted to 677 MW, or 4.3 percent of the 15,657 MW total peak demand that would have existed had there been no DSM programs. Had demand-side activities not been in place, distributors of electricity in South Carolina would have been obligated to provide 677 MW of additional electricity during the annual system peak, an amount equivalent to the production of more than eight 80 MW combustion turbines. Unfortunately, the 677 MW peak reduction in 2000 shows a decrease of 89 MW from the 766 MW peak reduction in 1996.

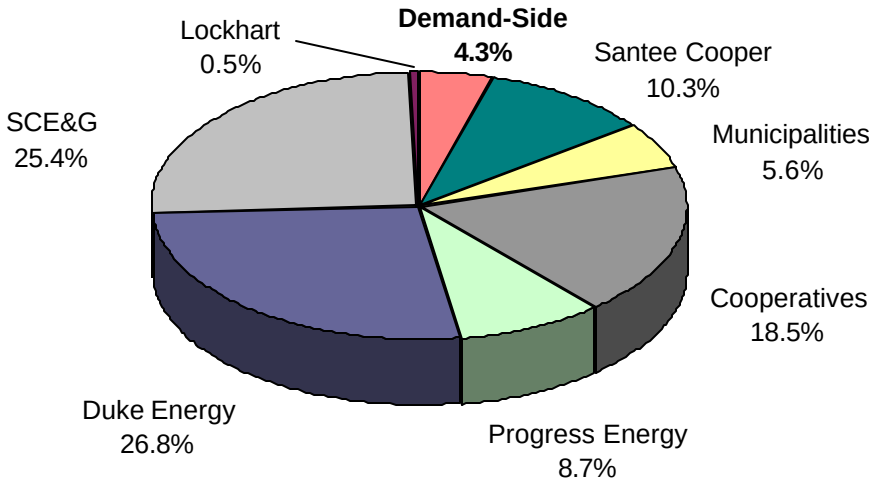

Figure 1. Distribution Sources of Supply to Meet Annual 15,346 MW Peak Demand in 2000

Figure 2 shows the growth in peak system demand (in MW) for all utilities, compared to the effects of demand-side activities. Peak growth is calculated against a base year, 1988, when peak demand was 10,801 MW. Growth in peak demand is a major cause of higher energy bills, due to the expense of building new plants to meet higher demand. By increasing demand-side activities, utilities can reduce the need for new power plants and minimize customers' future bills. As reported in the data received for the 2000 report, the growth in system peak is projected to grow almost 245 percent between 1996 and 2005, while the reduction due to demand-side management is projected to decrease by about 6.8 percent between 1996 and 2005.

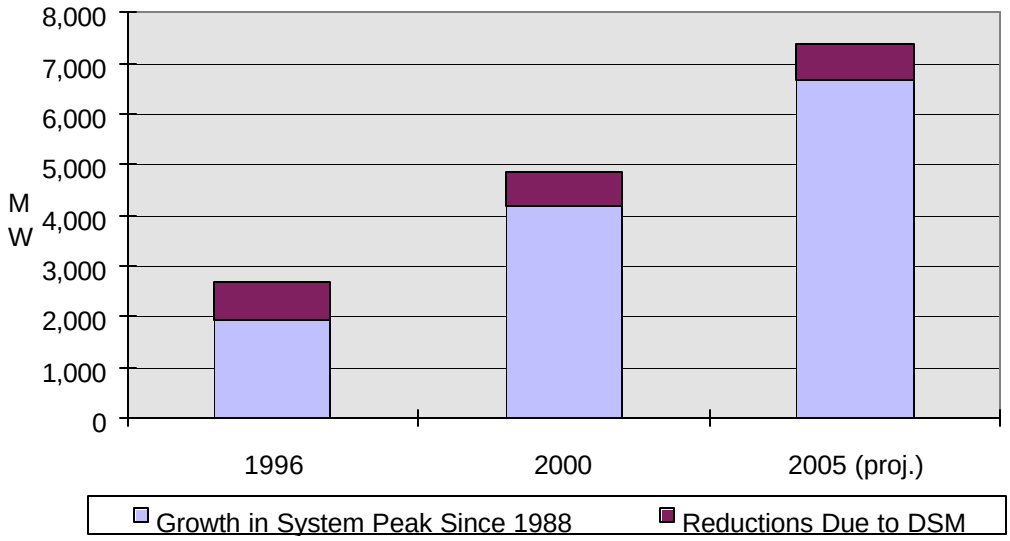

Figure 2. Growth in Peak Demand and Effect of Demand-Side Activities (in MW)

Three categories of electric utility DSM programs contribute nearly all the energy savings:

- Load management programs provided 57 percent (382 MW) of peak demand reductions in 2000.
- Energy efficiency programs, in addition to reducing overall consumption, accounted for 18 percent (121 MW) of the total peak demand reduction in 2000.
- Standby generation was responsible for 23 percent (155 MW) of the total peak demand reduction in 2000.

The combined effect of these peak-reducing demand-side activities for all utilities is expected to increase about 30 MW between 2000 and 2005. Further discussion of these peak-reducing demand-side activities is provided in Appendix F.

Figure 3 depicts the total amount of peak savings, by distributor, over a ten-year period. The chart includes actual data for 1996 to 2000 and projected data for 2001 to 2005. Savings from demand-side management are projected to increase from 2000 to 2005, but savings in 2005 will still be 7 percent less than the peak savings of 759 MW in 1996.

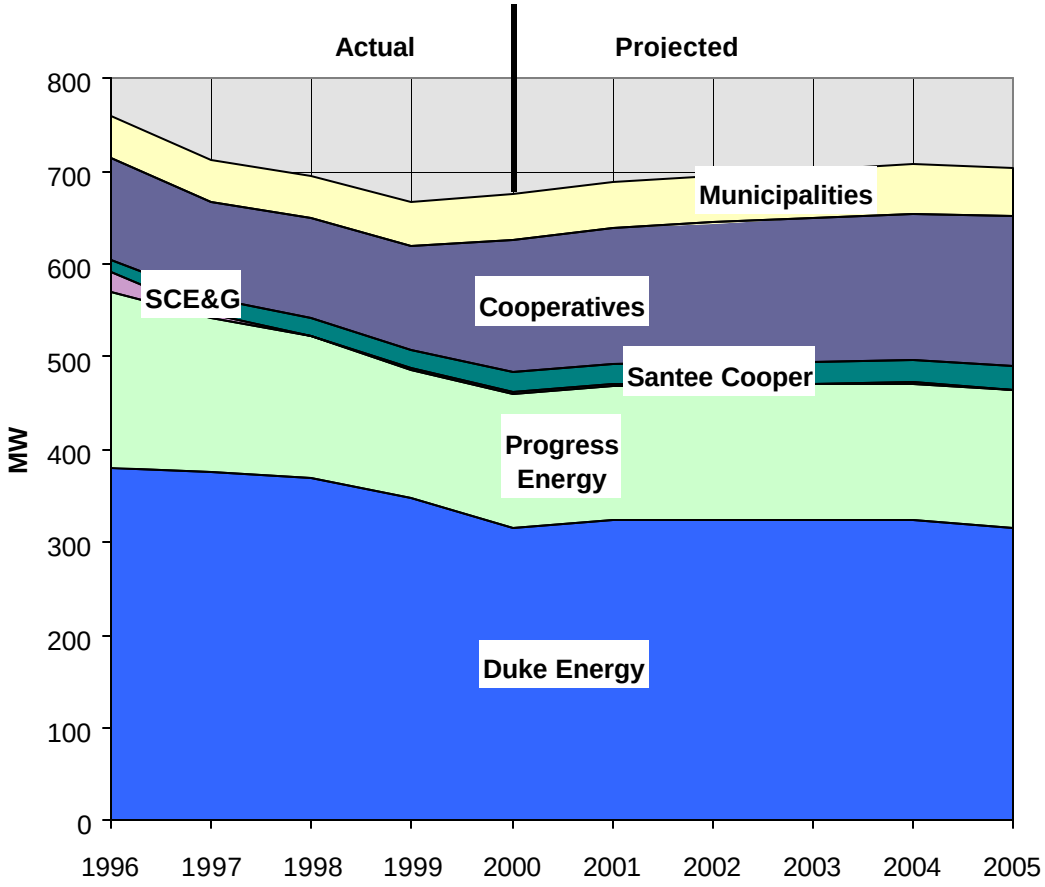

Figure 3. Peak MW Avoided Due to Demand-Side Activities

In the 1996 DSM Report, utilities projected their savings from peak through DSM for 2000. Compared to actual 2000 data, these projections have shrunk by about 22 percent. Figure 4 documents the changes among the various utilities' DSM programs between the 1996 and 2000 reports, with reference to projections and actual 2000 data. SCE&G, Duke, and Progress Energy report the greatest changes. Their projections for savings from peak through DSM programs fell 90.4 percent, 30.3 percent, and 26.6 percent, respectively. The municipalities and Santee Cooper also revised their projections downward, while the cooperatives increased their projection. Taken as a whole, however, the electric utilities reported a 21.8 percent difference between their 1996 projections for 2000 and actual 2000 data.

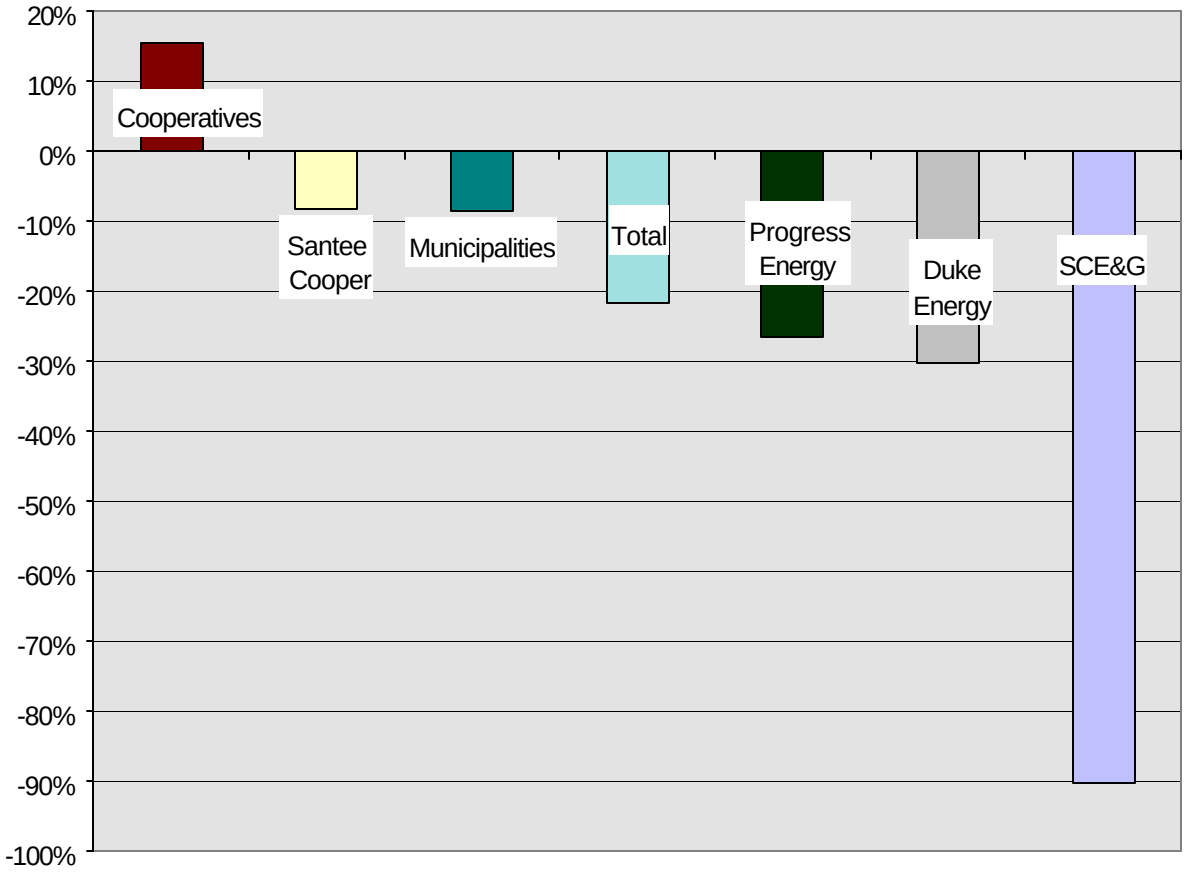

Figure 4. Difference Between Projections for 2000 Savings from Peak and Actual 2000 Savings From Peak Through DSM, 1996-2000

Figure 5 depicts the percentage of peak demand accounted for by demand-side management programs for 2000 for the investor-owned utilities, Santee Cooper, the municipalities, and the electric cooperatives. Progress Energy reduced its peak demand by 10.5 percent through demand-side activities, and Duke reported an 7.5 percent peak reduction.

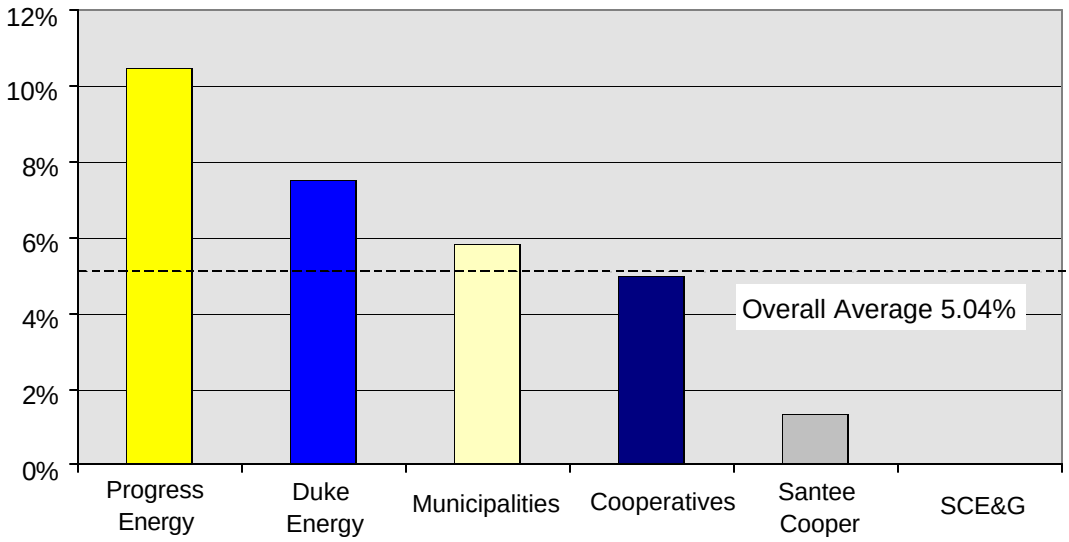

Figure 5. DSM as Percentage of Peak Demand, 2000

The municipalities reported great variation in their demand-side management programs. Municipalities that reported better than average peak reductions for the year 2000 from demand-side programs are as follows: Gaffney, 24.4 percent savings from peak demand; Clinton, 11.8 percent; Easley, 10.2 percent; Rock Hill, 9.8 percent; Camden, 6.2 percent; and Westminster Commission of Public Works, 5.1 percent. Most of these savings come through peak shaving and standby generation programs maintained by the municipalities themselves, as opposed to customer-based programs. The other 13 municipalities reported below average results for 2000; many reported no demand-side activities whatsoever.

There is also considerable variation among the electric cooperatives, but less than among the municipalities. Above average demand-side management programs include those offered by the following: Lynches River Electric Cooperative, which reported peak savings of 8.6 percent for 2000; Mid-Carolina Electric Cooperative, 7.0 percent; the Saluda River Electric Cooperative system (composed of five distribution cooperatives: Blue Ridge, Broad River, Laurens, Little River and York), 6.8 percent; Berkeley Electric Cooperative and Palmetto Electric Cooperative, both at 5.9 percent; and Horry Electric Cooperative, 5.5 percent.

Santee Cooper reported only a 1.3 percent reduction of peak demand, while SCE&G reported a negligible reduction in peak through DSM programs.

Complete details are in Appendix I.

Reductions in Electricity Consumption

The second goal of demand-side activities is to increase efficiency by reducing the overall amount of energy used over time (as opposed to the peak amount used at a given instant). This energy is measured in megawatt hours (MWh) and represents annual use. Whereas lowering of peak demand reduces the need for additional power plants, reducing the amount of energy used conserves fuel resources and reduces harmful emissions into the atmosphere.

Figure 6 shows the proportions of electricity distributed by utilities during 2000 along with the portion of consumption that was avoided due to the combined effect of all demand-side activities. Over 77.1 million MWh of electricity were used in 2000, at a cost to consumers of over $6 billion. The combined effect of all demand-side activities was 0.28 million MWh saved, or a 0.36 percent reduction in the consumption of electricity for that year. Although this represents savings to consumers of about $22 million per year, the 0.36 percent South Carolina reduction in consumption was just over two-tenths of the 2000 national average of a 1.6 percent reduction in energy consumption from utility-sponsored demand-side activities. Had South Carolina utilities equaled the national average in reduction of consumption through utility programs, consumers would have saved $96.5 million instead of $22 million. (Appendix F provides a description of the various kinds of demand-side management programs implemented by South Carolina electric utilities.)

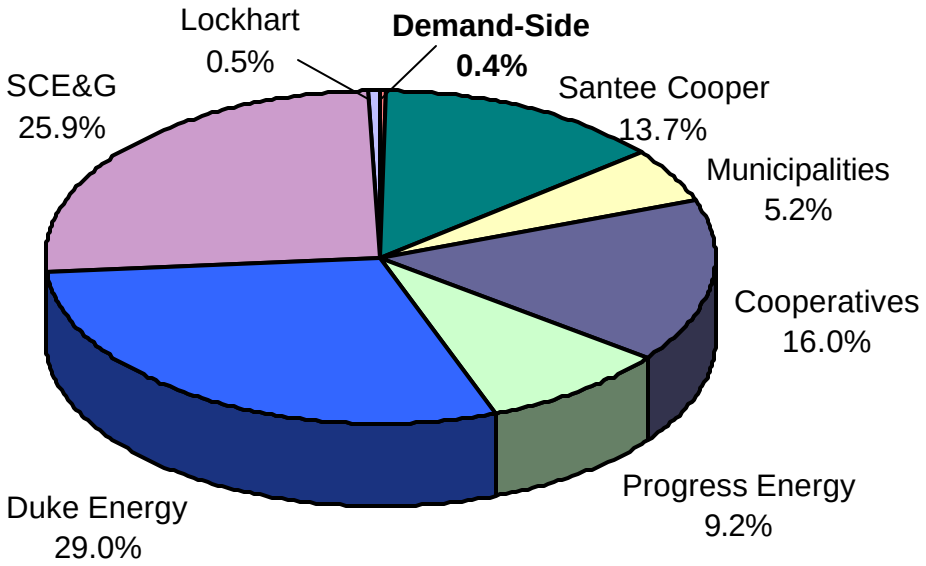

Figure 6. Distribution Sources of Supply for Electricity Consumption in 2000

Although the $0.074 average residential revenue per kWh sold for South Carolina electric utilities is better than the average revenues for 30 other states, South Carolina residential consumers rank fifth in

the nation in the per household amount of money spent on electricity (*Statistical Yearbook of the Electric Utility Industry*, Edison Electric Institute, Advance Release/2001 Edition). The high expenditures on electricity are the result of high consumption levels, not high rates. Demand-side management conservation programs reduce consumption levels. Because of South Carolina's high electricity use and high expenditures, increased energy conservation through cost-effective demand-side management programs has considerable potential for saving the state's consumers many more millions of dollars.

Figure 7 compares the growth in total consumption with savings due to demand-side activities. Consumption growth is compared to a base year of 1988 when consumption was more than 53 million MWh. Utilities could reduce the rise in customers' bills by expanding demand-side activities. Instead, they have reduced demand-side activities.

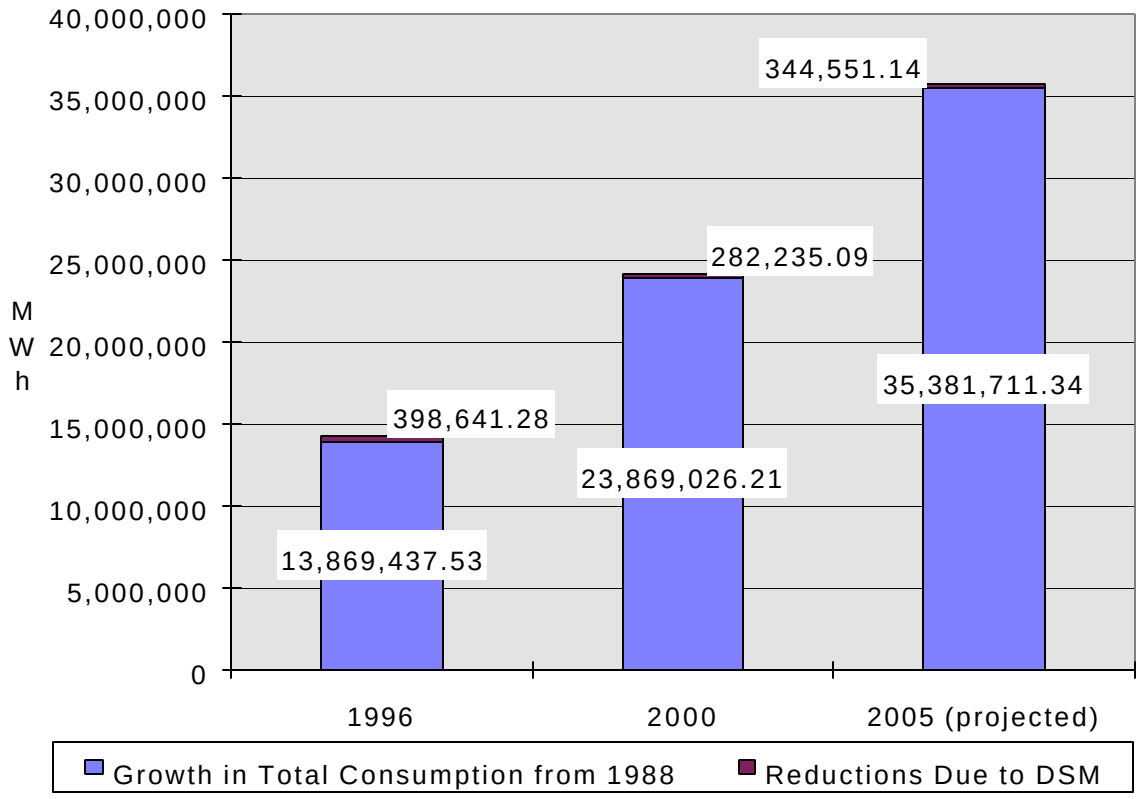

Figure 7. Power Supply Growth vs. DSM Savings (MWh)

Figure 8 depicts total electricity use avoided due to DSM activities over a ten-year period. Their cumulative effect has decreased 29 percent from the 1996 peak to 2000. This reduction in avoided electricity use has cost consumers about $9.1 million (assuming constant rates).

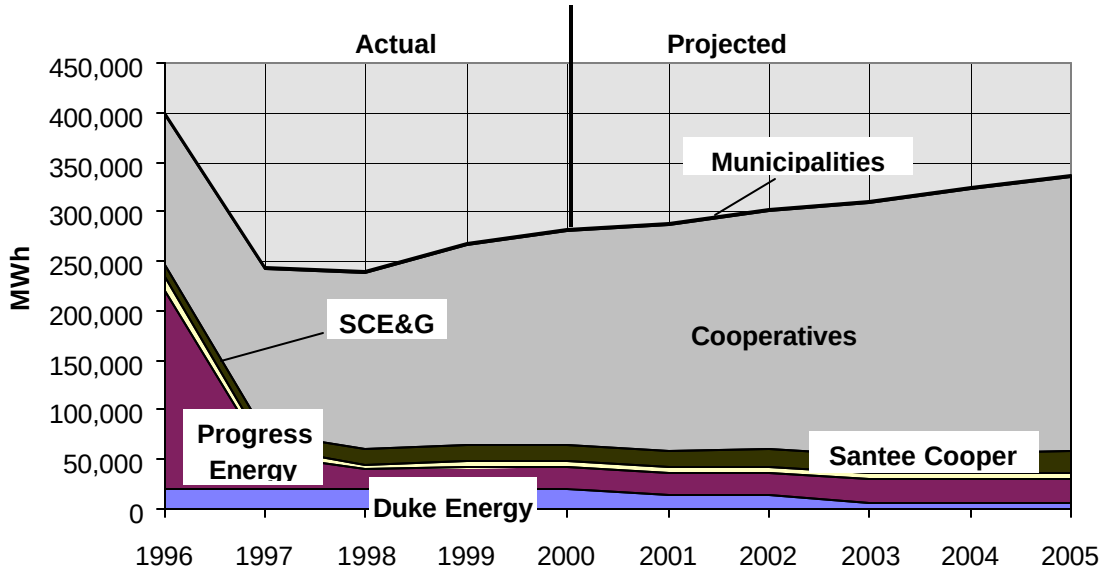

Figure 8. Annual MWh Avoided Due to Demand-Side Activities

Figure 9 depicts energy savings in MWh from demand-side activities as a percentage of total power generation, as reported for the year 2000. The cooperatives reported that in 2000 demand-side activities reduced their total energy consumption by 1.74 percent, while Progress Energy and Santee Cooper reported that total consumption was reduced by .30 percent and 0.16 percent respectively. Duke, the municipalities and SCE&G reported even lower savings.

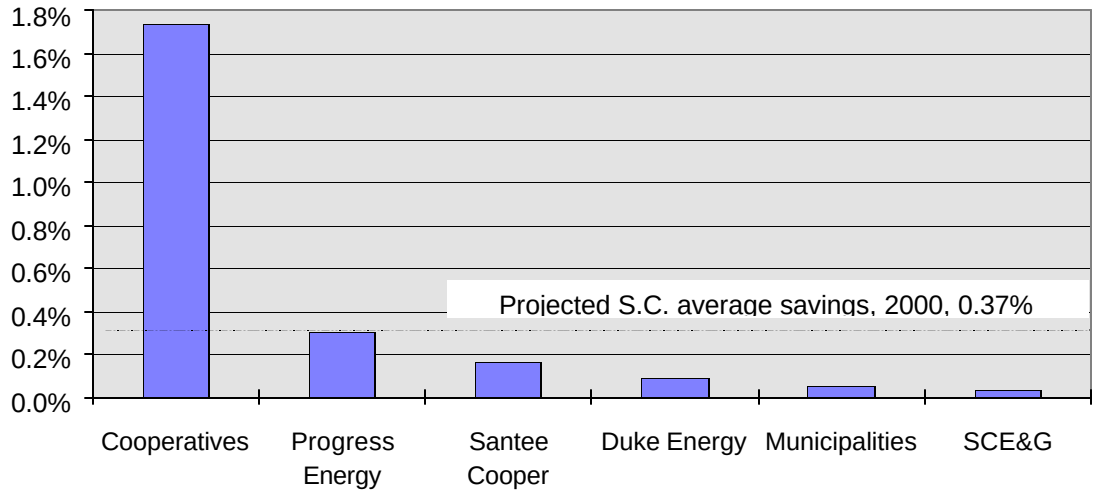

Figure 9. Energy Savings from DSM as Percentage of Total Generation, 2000

Electric cooperatives that achieved the most energy savings from demand-side activities for the year 2000 include: Saluda River Electric Cooperative System at 7 percent; Horry at 1 percent; Mid-Carolina at 0.9 percent; Berkeley at 0.7 percent; Black River at 0.5 percent; Lynches River at 0.4 percent; and Edisto, Palmetto and Tri-County at 0.3 percent each. The remaining seven electric cooperatives reported lower.

Demand-side programs offered by the municipalities place little emphasis on overall energy savings. Only Gaffney (0.3 percent savings reported for 2000), Camden (0.2 percent), Clinton (0.1 percent), Easley (0.1 percent) and Rock Hill (0.1 percent) indicated significant activity.

Complete details are in Appendix I.

Qualified Facilities

The federal Public Utilities Regulatory Policies Act of 1978 (PURPA) allows end users who generate power at their facilities to supply power to the electric utilities providing service to those users. PURPA also allows private companies to generate and to supply electricity to public utilities if that power is generated using renewable energy resources. A Qualified Facility (QF), as defined by PURPA, includes industrial cogeneration facilities and independent power producers using renewable fuel sources, including wood wastes, incinerated municipal solid waste and small-scale hydro-electricity. Qualified facilities reduce the need for new power plants just as load management does, by reducing the demand on utilities' systems.

Merchant power plants, electric generating facilities that produce electricity for sale on the open wholesale power market, may or may not be considered Qualified Facilities depending on the type of operation and the corresponding application filed with the Federal Energy Regulatory Commission.

Figure 10 compares the total utility-generated system peak with the savings from peak due to demand-side management and the total potential savings that could be achieved from the use of qualified facilities.

Electricity from qualified facilities is classified into two categories: purchase, meaning the utilities purchase the power generated; and displace, meaning that the power is used by the facility itself, which would otherwise be using power from the utility's grid. Displacement from qualified facilities, in other words, is analogous to the other demand-side activities detailed in this report, in that it contributes to reducing overall system peak. Purchase is a direct, non-utility addition to total system peak capacity.

In 2000, qualified facilities in SC had the capacity to provide 265.67 MW of purchase power and 176.72 MW of displacement power, for a total of 442.39 MW of power, potentially meeting about 3 percent of system peak.

The DSM, QF displacement and QF purchase bands represent a total of 1,120 MW for 2000 and 1,150 MW for 2005. This means that utilization of DSM, QF displacement and QF purchase could have allowed utilities to avoid the need for the equivalent of over three and one-half new 300 MW coal-fired power plants. If the DSM, QF displacement and QF purchase bands were larger, the need for additional power plants in the future would be even less.

A listing of qualified facilities and their generating capacities is included in Appendix G.

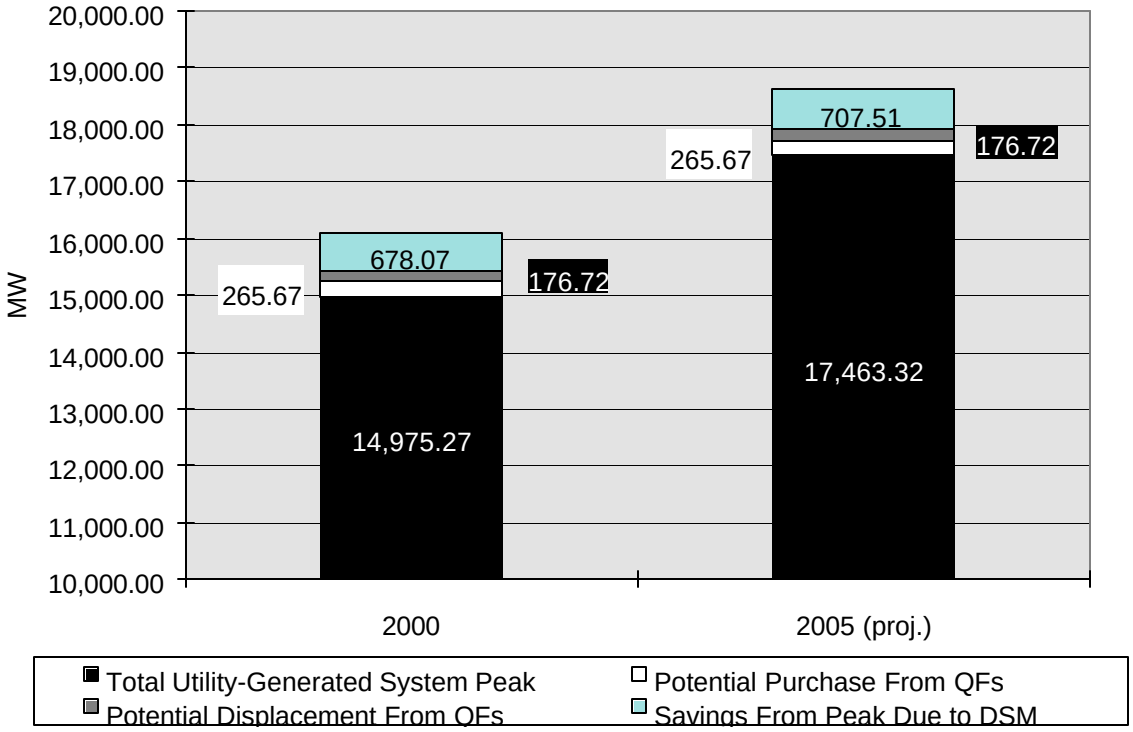

Figure 10. Total Capacity from Qualified Facilities and DSM vs. Total Peak

Figure 11 shows the annual contribution of energy, measured in MWh, from both cogeneration facilities and renewable energy technologies for ten years, including actual data from 1996 to 2000 and projected data from 2001 to 2005. This includes energy purchased by utilities, but not energy that was displaced for internal consumption. As seen on the graph, the energy produced by these facilities has increased about 72 percent over the last five years and is projected to increase almost an additional 13 percent by 2005.

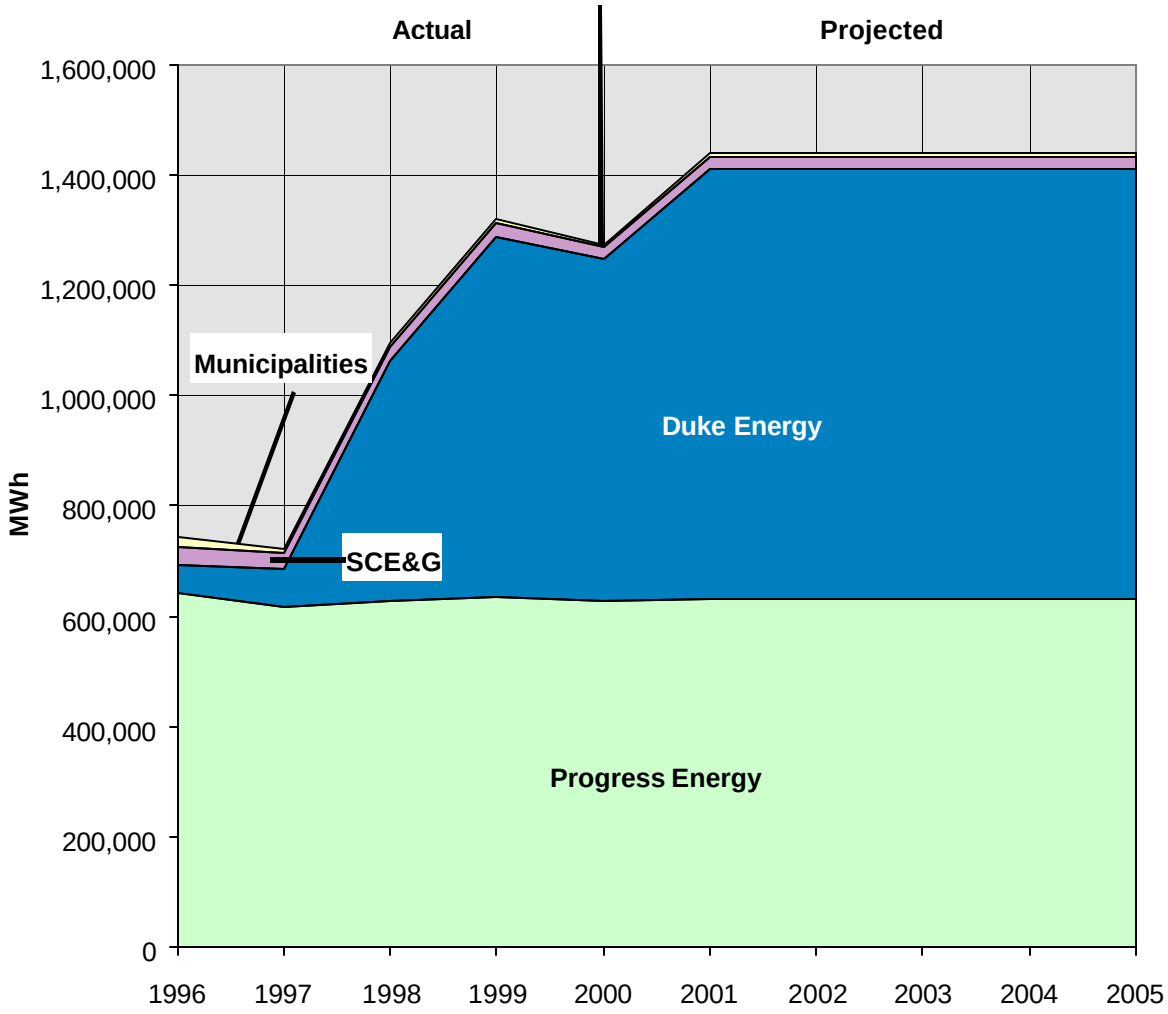

Figure 11. Annual Energy from Qualified Facilities

Natural Gas

The basic purpose of demand-side activities is to change energy-use decisions of customers in ways that are beneficial to both the customers and the utility itself. Whereas electric utilities must meet their load instantaneously, natural gas suppliers have the ability to store gas and use interruptible contracts to maintain reliability. There are two categories of demand-side activities for natural gas: conservation and load management programs.

Conservation and load management programs encourage the consumer to use energy more efficiently. The major targeted groups are newly constructed residences, existing residences, commercial buildings and industrial facilities. These programs promote the use of more effective building envelopes and high-efficiency appliances and climate conditioning equipment.

The total number of customers participating in these activities in 2000 was 16,379 out of a total of 532,617 natural gas customers. During 2000, reported reduction in peak demand through demand-side management was 3,251 dekatherms (DT), or about .2 percent. Annual consumption was reduced by 18,711 DT, or about .01 percent.

Natural gas utilities project that load management DSM activities will increase slightly over the next five years. By 2005, utilities are expecting a reduction of 3,283 dekatherms in the annual peak. Activities in the industrial sector contribute most of this peak reduction. Figure 12 depicts projected savings from natural gas DSM programs for the two investor-owned utilities that provided significant projected savings in 2000.

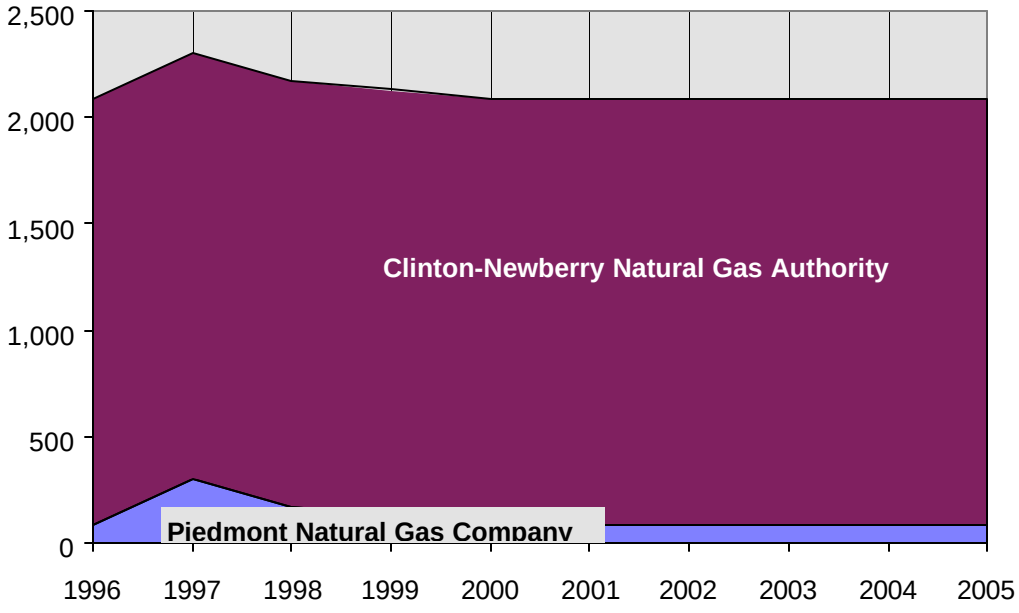

Figure 12. Peak DT Avoided Due to Demand-Side Activities

CONCLUSION

Electric utilities continually evaluate demand-side programs and create, modify or eliminate them as required to meet generation and transmission system needs, revenue needs, and customer needs. Demand-side programs, which were used to shave off 4.3 percent of peak demand during 2000 and reduce consumption by 0.4 percent, are declining in use by utilities. Few new programs are being implemented, and many previously existing programs have been and are being eliminated. Also, there is considerable variety among the utilities in the application of demand-side management.

The future of electric demand-side programs in South Carolina appears bleak due in part to the low cost of electricity and the continuing discussion about possible deregulation of the electric industry. Although interest in deregulation in the state has waned, there has been no corresponding renewal of interest in demand-side management programs.

Demand-side programs help reduce harmful emissions, and at the same time, cut electric bills and improve economic productivity. However, investor-owned electric utilities are downgrading their planned future use of conservation and load management programs. Programs that make sense in a regulated market with government-guaranteed customer bases may not make as much sense in a deregulated market, at least in terms of payoff for stockholders. If a utility has no guarantee of continuing to be able to serve a customer in the future, it clearly has less incentive to spend money now to help that customer reduce their energy needs in the future.

In a highly competitive electricity marketplace, growth in energy sales will necessarily take precedence over the long-range energy efficiency programs in service areas, since there may be no service areas for generators. Similar to the deregulation situation of the telecommunications industry, consumers may be encouraged to use more, not less, electricity.

Price-wise, there will be winners and losers if retail deregulation occurs; large industrial users will clearly be winners. However, the nature of the wins and losses for other classes of consumers (e.g., residential users, rural and small-town consumers, low-income citizens) is far from clear. It is obvious they are already losing the demand-side management programs once offered.

The distinction between electric rates, as measured in cents per kWh, and electric bills, as measured in rates times number of kWh consumed, is important. South Carolinians have somewhat low average electric rates and somewhat high average electric bills. These high bills are due in large part to high consumption.

In a competitive market, utilities may focus on keeping rates low in order to attract customers. In order to maximize profits, they would probably encourage high sales volumes. Customers, on the other hand, are affected by the total amounts of their electric bills; the greatest determinant of bills is volume of use, not rates. Therefore, the best way to keep bills down is through conservation and efficiency.

A dilemma lies in the concept of “cost-effective” demand-side management. A program which is cost-effective for a consumer is one which saves the consumer more money through reduction in consumption than it adds through increase in unit price. Thus, a cost-effective conservation program could, by increasing efficiency, raise unit costs but cut total utility bills if less electricity is consumed.

Cost-effective for a utility stockholder, on the other hand, means that the program adds more to the utility's revenues than it adds to the utility's costs. Thus, in a competitive situation, the cost-benefit ratio for utility stockholders is quite different from the cost-benefit ratio for consumers. In a system of regulated monopolies, however, an enlightened and meticulous regulatory policy can bring the cost-benefit scenarios together into a win-win situation for all parties.

Yet to be determined are environmental effects. Unlike the telecommunications industry, the electricity industry builds power plants and consumes fossil and nuclear fuel. It is quite possible that increased emphasis on greater sales over total territorial customer service will result in greater adverse environmental impacts associated with power plant and transmission line construction and electricity generation, including impacts on air quality, water quality and natural resource preservation. It might also be possible, however, to guide deregulation in such a way as to minimize adverse environmental impacts.

In any case, electric utilities increasingly cite the prospect of future deregulation as a reason for cutting back on future energy conservation activities, thus making energy conservation one of the first casualties of deregulation, even prior to its actual implementation. The supply and cost crisis in California makes deregulation in South Carolina appear to be less and less of a certainty. It is clear that South Carolina will not move to retail deregulation at any time in the near future. Nevertheless, demand-side programs are being phased out as though deregulation were, in fact, a near-term certainty.

There is no doubt that demand-side programs are declining, and that the deregulation issue is partially driving this decline. New technology which allows such programs as green power pricing and time-of-day pricing for even the smallest customers, along with precise knowledge of the environmental nature of generation sources at any given time, may allow citizens to reap the benefits of competition without sacrificing the economic and environmental benefits of conservation and efficiency.

The emergence of merchant power plants is another issue facing South Carolina today. A merchant power plant is an electric generating facility that produces electricity for sale on the open wholesale power market. Encouraged by federal deregulation, a strengthening economy, and fears surrounding power shortages, merchant power plants are becoming more and more prevalent. While the economic and environmental pros and cons of these merchant power plants are hotly debated, that they will have an effect on South Carolina's current utility system dynamics undeniable. A listing of the companies who have applied to build merchant power plants in South Carolina, along with a status update on those applications, can be found in Appendix H.

Most of the arguments in favor of merchant power plants surround economic growth. They offer lucrative jobs during construction and will add tens of millions of dollars in taxes thereafter to local economies. The construction of a facility generally generates an average of 250 to 300 construction jobs over an 18-month period, and would result in the purchase of millions of dollars of material from local businesses. Once constructed, the plants have a regular staff of approximately 20 to 25 people. In addition, the power stations expand the tax base wherever they are built and are able to generate substantial tax revenues to the host community.

Opponents of the plants argue that the environmental costs far outweigh any economic benefits. Energy plants require a tremendous amount of water to operate, and this could destabilize a river's flow. Also,

sites are generally chosen in an area of convergence of natural gas pipelines and electrical transmission lines. In South Carolina, these tend to be areas that are borderline in their compliance with air quality standards. The addition of power producing plants to these areas could cause major air quality concerns. Another issue that must be addressed is the impact merchant power plants will have on the existing transmission system in South Carolina. Some fear that current utility customers may have to bear the costs of expanding and upgrading transmission lines to accommodate the new plants. Lastly, many argue that while the initial investment is high, there is the potential for all of the power produced in the state to be sold outside of its borders.

To locate a merchant power plant in South Carolina, companies must be approved by the Public Service Commission and the Department of Health and Environmental Control. Currently, four plants have been approved, and of those one is already operational. Also, there are four other plants in some stage of review. Some other states have put moratoriums on merchant power plants until further studies can be made. Legislation has been introduced in South Carolina to impose a similar moratorium, but has not been enacted. At the request of the legislature, the Public Service Commission has contracted with ICF Consulting, Inc. to perform a study on merchant plants.

There is no doubt that merchant power plants will have a significant impact on the energy picture in South Carolina in the coming years.

APPENDICES

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APPENDIX A
Definitions

Cogeneration systems produce both electricity and process steam or heat from a single fuel source. Cogeneration works best in industrial operations that use significant amounts of both electricity and process steam or heat on a relatively stable day-to-day basis.

Demand-side management (DSM) refers to the use of cost-effective conservation, efficiency, and load management in order to reduce the demand for and cost of energy services. Demand-side management is a resource option that complements power supply. It not only saves the customer money, but also helps the utility achieve less pollution and avoid more costly supply-side investments.

Dekatherm (DT) is a unit of measurement of natural gas, equal to 1,000,000 BTUs or 293 kWh.

Kilowatt (kW) is a measure of real power, equal to 1,000 watts. A common equivalent is that 3/4 kW is equal to one horsepower. Higher quantities are expressed in megawatts (MW), equal to one million watts. A typical coal-fired electric plant produces about 300 MW.

Kilowatt-hour (kWh) is a unit of electrical measurement indicating the expenditure of 1,000 watts for one hour. Higher quantities are expressed in megawatt-hours (MWh), or the expenditure of one thousand kilowatts for one hour.

Load management shifts demand for power from periods of peak demand to periods of less demand. Although this process may more efficiently utilize generation and transmission systems and thus reduce the need for construction of generating and transmission facilities, it does not necessarily decrease the overall use of energy.

A **Qualified Facility** (QF) is defined by the Public Utilities Regulatory Policies Act of 1978 and includes industrial cogeneration facilities and such sources as independent power producers using renewable fuel sources, including wood wastes and other biomass, incinerated municipal solid waste and small-scale hydro-electricity.

When **retail wheeling** occurs, end users of electricity may choose from among several power producers regardless of geographical location, and have the purchased power "wheeled" to them through existing transmission and distribution lines owned by utilities which may be different from the seller of the purchased power. Current ideas for restructuring the electric industry include proposals to permit retail wheeling.

APPENDIX B
Utility Participation in Survey

Electric Utilities

Central Electric Power Cooperative, members:
Aiken Electric Cooperative
Berkeley Electric Cooperative
Black River Electric Cooperative
Coastal Electric Cooperative
Edisto Electric Cooperative
Fairfield Electric Cooperative
Horry Electric Cooperative
Lynches River Electric Cooperative
Marlboro Electric Cooperative
Mid-Carolina Electric Cooperative
Newberry Electric Cooperative
Palmetto Electric Cooperative
Pee Dee Electric Cooperative
Santee Electric Cooperative
Tri-County Electric Cooperative
Saluda River Electric Cooperative, 5 members:
New Horizon Electric Cooperative, 5 members:
- Blue Ridge Electric Cooperative
- Broad River Electric Cooperative
- Laurens Electric Cooperative
- Little River Electric Cooperative
- York Electric Cooperative

Bamberg Board of Public Works
City of Bennettsville
City of Camden
City of Georgetown
Greenwood Commission of Public Works
McCormick Commission of Public Works
Town of Due West
Orangeburg Department of Public Utilities
Town of Prosperity
Seneca Light and Water Plant
Town of Winnsboro
Piedmont Municipal Power Authority
- City of Abbeville
- City of Clinton
- Easley Combined Utility System
- Gaffney Board of Public Works
- Greer Commission of Public Works
- Laurens Commission of Public Works
- City of Newberry
- City of Rock Hill
- City of Union
- Westminster Comm. of Public Works

Progress Energy (formerly CP&L)
Duke Power Company
Lockhart Power Company
South Carolina Electric & Gas Company
Santee Cooper (South Carolina Public Service Authority)

Natural Gas Utilities

Bamberg Board of Public Works
City of Bennettsville
Fountain Inn Natural Gas System
Laurens Commission of Public Works
Orangeburg Department of Public Utilities
Town of Blacksburg
Town of Winnsboro
Chester County Natural Gas Authority
Clinton-Newberry Natural Gas Authority
Fort Hill Natural Gas Authority
Greenwood Commission of Public Works
Lancaster County Natural Gas Authority
York County Natural Gas Authority
Piedmont Natural Gas Company
South Carolina Electric & Gas Company
South Carolina Pipeline Corporation
United Cities Gas Company

APPENDIX C
Purposes of the Report and Statutory Requirements

The primary purpose of this report is to describe alternative ways to manage the growth in energy demand in South Carolina, and to present that information to the people of the state, its elected officials and the utilities themselves.

Its second purpose is to stimulate an improved interest in pursuing demand-side activities wherever economically and environmentally prudent [S.C. Code, Section 48-52-210(B)(3)]. By increasing awareness about demand-side activities statewide, the report is intended to lead to expansion of these activities and to lower energy use overall.

The third purpose of this report is to encourage utilities to maximize the use of cost-effective demand-side options in meeting the future energy needs of the citizens of South Carolina [S.C. Code, Section 48-52-420(5)].

There are several specific objectives that fulfill the stated purposes of this report:

(1) To report the past, on-going and projected status of demand-side activities and purchase of power from qualified facilities [S.C. Code, Section 58-37-30(B)];

(2) To report the proportion of energy generation that is avoided by the use of demand-side activities in South Carolina;

(3) To report the numerical trends of the effects of demand-side activities.

These objectives are met in such a way as to minimize duplication of information reported by the retail suppliers of electricity and natural gas, appropriately using information already reported to other governmental entities.

APPENDIX D
Description of Data Requested from Utilities

Qualitative Data

Utilities were asked to discuss the possible effects of retail wheeling, as well as any modifications and/or changes in their demand-side management programs since the report on 1999 activities.

Quantitative Data

Two basic types of numerical data are provided: specific data on each demand-side activity and data on each supplier's system as a whole. This combination of data allows comparisons of the effect of different demand-side activities on total system loads. The data describes energy used by retail customers, but not wholesale customers. This procedure is necessary to avoid double counting when data is combined on a statewide basis.

Descriptions of the numerical data requested from suppliers of electricity are provided below. Descriptions for suppliers of natural gas closely follow the same structure, except for the units of data (i.e., dekatherms). The item numbers below correspond to the item numbers on Data Forms 1 and 2 (see Appendix J).

Data Requested For Each Demand-Side Activity

(1) Total kW Saved (or avoided) from Annual Peak for this Demand-Side Activity

This item requests the amount of kW saved by lowering the highest peak demand experienced during each calendar year through this demand-side activity. The sum of these values provides the total amount of generating capacity that was not needed due to the beneficial effects of demand-side activities.

(2) Total Annual kWh Saved (or avoided) for this Demand-Side Activity

This value represents the amount of energy in kWh saved over a calendar year from each demand-side activity. The sum of these values provides the total amount of annual generation that was avoided because of the beneficial effects of demand-side activities.

(3) Proportion of Total Customers in Class for Whom this Demand-Side Activity Is Available

This item identifies the percentage of retail customers in a particular class to whom a specific demand-side activity is available.

(4) The Number of Customers Participating in this Demand-Side Activity

This item specifically refers to the number of customers participating in this demand-side activity at or nearest the time of the annual peak demand.

Data Requested For Each Supplier's System as a Whole

(5) Annual Peak System Demand in kW

This item requests the total amount of retail energy demand in kW during the highest annual peak demand during each calendar year.

(6) Total Annual System kWh Sales

This value shows the total amount of annual generation in kWh that was used by retail customers.

(7) Total Miles of Distribution Line

This provides a measure of the relative size of the distribution system.

(8) Total Number of Customers (all classes)

(9) Total Generation (kWh) Supplied from Qualified Producers or Avoided Due to Their Generation.

This item is necessary to determine the contribution of total generation supplied from these producers. A listing showing the identity and generating capacity of each qualified producer on the supplier's system is necessary to track changes and assess the potential of this energy source. Qualified producers are those, such as cogeneration facilities, from which the utilities are required to purchase power under the Public Utility Regulatory Policies Act of 1978 (PURPA). Cogeneration systems produce both electricity and process steam or heat from a single fuel source. Cogeneration works best in industrial operations that use significant amounts of both electricity and process steam or heat on a relatively stable day-to-day basis. Other qualified facilities in South Carolina include small-scale hydro-electricity providers.

APPENDIX E
Discussion of Data

This report addresses reported demand-side activities in South Carolina only. However, two investor-owned electric utilities and one investor-owned natural gas utility also supply energy to customers outside of the state. Because demand-side data is collected on a system-wide basis, the percentage of demand-side activities for South Carolina was estimated. Progress Energy applied a correction factor for each program based on historic progress in recent years. The data submitted by Duke Energy Company was allocated on the basis of South Carolina retail demand as a percentage of total retail demand reflected in a recent jurisdictional study. Similarly, Piedmont Natural Gas, which supplies natural gas both in and outside of South Carolina, estimated demand-side data specific to the state.

Each group reported demand-side activities in various categories and customer classes. Some demand-side activities, such as load management programs, do not appreciably reduce the use of energy. Load management aims to shift the demand for power to periods of less demand. Although this may more efficiently utilize generation and transmission systems and thus reduce the need for construction of generating and transmission facilities, it does not necessarily decrease the overall use of energy. This report considers the energy values reported for each demand-side activity to be net values, thus reflecting the combined effect of decreases and increases in energy use from those activities that are determined to use more energy during the off-peak periods.

Accurately measuring the effect of demand-side activities is difficult because many variables can change the use of energy over a period of time. The measurement must determine the amount of energy that would have been used had the demand-side activity not been in effect. Sorting out which changes were attributable to demand-side activities and which were the result of other factors is not an exact process. The industry continues to research and improve the estimates in order to enhance the reliability of future determinations of the impact of demand-side activities.

Of those natural gas utilities that indicated they had current or projected demand-side activities, the data was reported for various categories and customer classes. The conservation and load management programs reduce peak demand as well as the consumption of natural gas through the installation of high-efficiency appliances and weatherization improvements.

APPENDIX F
Categories of Electricity Demand-Side Management Programs

There are several categories of demand-side activities, each of which has its own effect upon the daily and seasonal electrical system load profile (the graph of electricity used versus elapsed time). The compiled numerical data for each of the categories described below is contained in Appendix I.

Conservation

Conservation programs are designed to entice consumers to use less electricity through changes in work and living habits, thereby reducing their need for electricity. Included in this category are public education and awareness programs that promote energy-reducing methods such as conservative thermostat settings, turning off appliances when not in use, and installing low-flow showerheads.

It is difficult to quantify the results of any one program, but many electric suppliers continue to conduct energy awareness advertising campaigns, demonstrations and seminars for various classes of customers.

Energy Efficiency

Energy efficiency programs reduce energy consumption by encouraging consumers to use energy more efficiently. There are many programs available, and each program is intended for a specific group of electricity users. Some of the targeted groups are newly built residences, existing residences, industry, commercial buildings, and agricultural applications. These programs promote the use of more effective building insulation, high efficiency industrial equipment, appliances, air conditioning equipment and lighting. Incentives consist of more favorable rate schedules, cash rebates, low interest loans, and technical assistance.

Over 148,000 customers participated in these activities in 2000, resulting in reductions of 121.2 MW of peak demand and 280,101 MWh in energy consumption. Programs in the residential sector account for most of these reductions. Over 90 percent of the peak demand reductions in energy efficiency activities were the result of programs implemented by the electric cooperatives, Progress Energy and Santee Cooper.

Load Management

Demand-side activities in this category reduce the instantaneous demand for electricity (MW) by limiting or discouraging use during periods of high demand. For many reasons, it typically costs more to supply power during peak periods. For example, some older, less efficient plants are only used to meet peak hour demand. Furthermore, other newer facilities are also only brought online during peak times because they use more expensive fuel (e.g., natural gas or fuel oil). Therefore, transferring the use of energy to periods of lower demand allows the energy to be generated and distributed using more efficient, base-load generating plants. Typical load management activities include allowing direct, remote control of air conditioners and water heaters, interruptible rate schedules for large customers, thermal energy storage systems using off-peak power, and time-of-use rates.

Over 233,000 customers participated in these activities in 2000, resulting in a reduction of the peak demand of about 382 MW and a decrease in consumption of about 290 MWh. Load management

programs used by Duke Energy Company accounted for about 75 percent of all peak demand reductions in this category.

Other Activities

Standby Generation Programs

Standby generation programs provide incentives for customers owning standby generators to utilize them during periods of high demand, thereby reducing the system peak demand. This is a generation displacement program similar to cogeneration, although this category is not a qualified source as defined by the Public Utilities Regulatory Policies Act of 1978. The requirements for these programs vary, but usually there is a payment from the electric company for the amount of capacity that is displaced by the generator as well as a fuel supplement payment based on kWh. Most suppliers require a minimum size generator in order to participate in the program as well as an agreement regarding the operation of the generator.

There were 13,067 customers using standby generation in 2000, resulting in a peak demand reduction of almost 155 MW, and energy use reduction of about 884 MWh. The standby generator program offered by Progress Energy provided about 76 percent of the peak demand reductions from this activity in 2000.

Voltage Reduction

Voltage reduction programs reduce the supplied voltage of electricity to all customers, usually between two and five percent. Lowering the supplied voltage has the overall effect of reducing the demand for electricity. There is some controversy concerning the effects of this practice, and as a result, it is used primarily as a last resort before interrupting the supply of electricity.

Some municipalities employ this practice for reducing the load during critical periods, thereby reducing the peak demand and energy consumption for all customers in each sector. This resulted in a 16 MW peak demand and 860 MWh annual consumption reduction in 2000.

APPENDIX G

Listing of Electricity Qualified Facilities - 2000

Utility	Plant Owner	Location	Fuel Type	Capacity (MW)	Purchase/ Displace
Progress Energy	Stone Container	Florence	wood chip	68	Purchase
Progress Energy	LA-Z-Boy Chair	Florence	wood	0.5	Displace
Progress Energy	DuPont Chemical	Camden	coal	29	Displace
Progress Energy	Sonoco	Hartsville	coal	27	Displace
Progress Energy	Foster Wheeler	Charleston	refuse	8.7	Purchase
Duke	Aquenergy	Piedmont	hydro	1.05	Purchase
Duke	Aquenergy	Cateechee	hydro	0.45	Purchase
Duke	Aquenergy	Cateechee	hydro	0.5	Purchase
Duke	Aquenergy	Ware Shoals	hydro	6.3	Purchase
Duke	Pacolet River Power	Clifton	hydro	0.8	Purchase
Duke	Bluestone Energy	Clifton	hydro	1.25	Purchase
Duke	Bob Jones University	Greenville	diesel	4.5	Purchase (2MW) & Displace (2.5MW)
Duke	Pelzer Hydro Co.	Pelzer	hydro	2.02	Purchase
Duke	Pelzer Hydro Co.	Williamston	hydro	3.3	Purchase
Duke	BMW	Greer	gas	5	Displace
Duke	Cherokee Cty. Cogen. Corp.	Gaffney	gas	100	Purchase
Duke	Northbrook Carolina Hydro	Ware Shoals	hydro	1.5	Purchase

Utility	Plant Owner	Location	Fuel Type	Capacity (MW)	Purchase/ Displace
Duke	Northbrook Carolina Hydro	Belton	hydro	3.5	Purchase
Duke	Northbrook Carolina Hydro	Greenville	hydro	2.4	Purchase
Duke	Unspecified Customer Self-Generation		N/A	74.72	Displace
SCE&G	International Paper	Eastover	wood chip	97.5	Purchase (34MW)& Displace (63.5MW)
SCE&G	Department of Defense	Parris Island	coal	3	Displace
Lockhart	Milliken & Co.	Pacolet	hydro	0.8	Purchase
Seneca	Coneross	Seneca	Hydro	0.6	Purchase

APPENDIX H
Status of Merchant Power Plants

This appendix provides a listing of the companies who have applied to build merchant power plants in South Carolina, along with a status update on those applications.

Merchant Power Plants

Company	Location	PSC Approval Status	Air Permit Status	Water Permit Status	Operation Status	Type	Size, Number of Units
Calpine *dba Broad River Energy	Cherokee County	Approved	Approved	Approved	Operational	Simple Cycle Turbine	965 MW, 5 units
Calpine *dba Columbia Energy	Calhoun County	Approved	Approved	Approved	Under Construction	Combined Cycle Turbine	515 MW, 2 units
Calpine *dba Palmetto Energy	York County	Pending	Under Review	Under Review	Not Applicable	Combined Cycle Turbine	970 MW, 3 units
Cherokee Falls Development Company *dba FPL Energy	Cherokee County	Approved	Under Review	Not Yet Submitted	Not Applicable	Simple Cycle Turbine	340 MW, 2 units
Cogentrix *dba Greenville County Power	Greenville County	Denied	Under Review	Under Review	Not Applicable	Combined Cycle Turbine	810 MW, 3 units
Entergy *dba Greenville Generating Company	Greenville County	Approved	Under Review	Approved	Not Applicable	Simple Cycle Turbine	930 MW, 6 units
Genpower	Anderson County	Approved	Approved	Approved	Under Construction	Combined Cycle Turbine	640 MW, 2 units
Moss Point Energy Associates *dba LS Power Development	Marion County	Not Yet Submitted	Not Yet Submitted	Under Review	Not Applicable	Coal Fired Plant	1160-1600MW, 2 units; or 580-800MW, 1 unit
Orion Power Holdings *dba Fork Shoals Energy	Greenville County	Not Yet Submitted	Under Review	Not Yet Submitted	Not Applicable	Combined Cycle Turbine	1000 MW, 4 units
Southern Company	Cherokee County	Not Yet Submitted	Under Review	Not Yet Submitted	Not Applicable	Combined Cycle Turbine	1260 MW, 4 units

*dba --doing business as

APPENDIX I
Compiled Numerical Data on Demand-Side Activities

This appendix provides the basic data on demand-side management programs in South Carolina for 1996-2005, compiled from the utilities' 2000 reports to the SC Energy Office and/or to the Public Service Commission.

Electricity

System Totals by Cooperative

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Aiken Electric Cooperative, Inc.										
Savings From Peak (MW)	5.1	5.0	5.1	4.6	5.0	5.0	5.0	5.0	5.0	5.0
As Percentage of System Peak (%)	3.2	3.3	3.0	2.7	2.8	2.8	2.7	2.7	2.6	2.5
Energy Savings (MWh)	1,537.5	1,596.0	1,614.0	1,615.5	1,624.5	1,624.5	1,624.5	1,624.5	1,624.5	1,624.5
As Percentage of Total System Energ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Berkeley Electric Cooperative, Inc.										
Savings From Peak (MW)	15.6	12.9	13.0	13.6	20.6	20.8	21.0	21.2	21.4	21.6
As Percentage of System Peak (%)	5.0	5.2	5.0	4.8	5.9	6.2	6.0	5.8	5.7	5.5
Energy Savings (MWh)	5,944.5	7,411.5	7,971.0	8,509.5	8,776.5	9,043.5	9,310.5	9,577.5	9,844.5	10,111.5
As Percentage of Total System Energ	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6
Black River Electric Cooperative, Inc.										
Savings From Peak (MW)	5.8	4.9	4.9	5.0	6.3	6.3	6.3	6.3	6.3	6.3
As Percentage of System Peak (%)	4.4	4.4	4.1	4.0	4.3	4.3	4.1	3.9	3.8	3.6
Energy Savings (MWh)	2,281.5	2,569.5	2,668.5	2,761.5	2,761.5	2,761.5	2,761.5	2,761.5	2,761.5	2,761.5
As Percentage of Total System Energ	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Coastal Electric Cooperative, Inc.										
Savings From Peak (MW)	1.2	1.1	1.1	1.2	1.5	1.5	1.5	1.5	1.5	1.5
As Percentage of System Peak (%)	3.4	3.3	3.2	3.2	3.5	3.6	3.5	3.3	3.2	3.1
Energy Savings (MWh)	172.5	171.0	168.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0
As Percentage of Total System Energ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Edisto Electric Cooperative, Inc.										
Savings From Peak (MW)	1.8	1.2	1.3	1.1	1.9	1.9	1.9	1.9	1.9	1.9
As Percentage of System Peak (%)	2.8	2.1	2.0	1.7	2.6	2.6	2.5	2.5	2.4	2.3
Energy Savings (MWh)	756.0	816.0	837.0	880.5	882.0	882.0	882.0	882.0	882.0	882.0
As Percentage of Total System Energ	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fairfield Electric Cooperative, Inc.										
Savings From Peak (MW)	3.6	2.9	3.0	2.2	4.4	4.4	4.4	4.4	4.4	4.4
As Percentage of System Peak (%)	3.1	3.0	3.0	2.0	4.1	4.3	4.3	4.3	4.3	4.3
Energy Savings (MWh)	774.0	918.0	970.5	981.0	975.0	975.0	975.0	975.0	975.0	975.0
As Percentage of Total System Energ	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Electricity

System Totals by Cooperative

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Horry Electric Cooperative, Inc.										
Savings From Peak (MW)	8.0	8.3	8.8	9.3	11.0	11.0	11.0	11.1	11.1	11.1
As Percentage of System Peak (%)	4.3	5.7	6.0	5.7	5.5	5.7	5.4	5.2	5.0	4.8
Energy Savings (MWh)	4,435.5	5,692.5	6,262.5	6,886.5	6,939.0	6,991.5	7,044.0	7,096.5	7,149.0	7,201.5
As Percentage of Total System Energ	0.8	1.0	1.0	1.1	1.0	1.0	0.9	0.9	0.9	0.8
Lynches River Electric Cooperative, Inc.										
Savings From Peak (MW)	3.8	3.1	3.1	1.9	3.6	3.7	3.7	3.7	3.7	3.8
As Percentage of System Peak (%)	5.9	4.8	4.5	2.5	8.6	5.1	4.9	4.7	4.5	4.3
Energy Savings (MWh)	973.5	1,120.5	1,168.5	1,215.0	1,246.5	1,278.0	1,309.5	1,341.0	1,372.5	1,404.0
As Percentage of Total System Energ	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3
Marlboro Electric Cooperative, Inc.										
Savings From Peak (MW)	0.9	0.5	0.6	0.5	0.8	0.8	0.8	0.8	0.8	0.8
As Percentage of System Peak (%)	1.0	0.5	0.5	0.4	0.8	0.7	0.7	0.7	0.6	0.6
Energy Savings (MWh)	220.5	258.0	258.0	255.0	253.5	253.5	253.5	253.5	253.5	253.5
As Percentage of Total System Energ	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03
Mid-Carolina Electric Cooperative, Inc.										
Savings From Peak (MW)	11.3	9.9	10.3	10.7	14.3	14.4	14.6	14.7	14.8	15.0
As Percentage of System Peak (%)	5.8	6.3	6.3	6.0	7.0	7.2	7.0	6.9	6.8	6.6
Energy Savings (MWh)	4,398.0	5,470.5	5,991.0	6,651.0	6,858.0	7,065.0	7,272.0	7,479.0	7,686.0	7,893.0
As Percentage of Total System Energ	0.6	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Newberry Electric Cooperative, Inc.										
Savings From Peak (MW)	1.8	1.4	1.5	1.5	2.3	2.3	2.3	2.3	2.3	2.3
As Percentage of System Peak (%)	4.0	3.4	3.5	3.1	4.7	4.3	4.1	3.9	3.7	3.6
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Palmetto Electric Cooperative, Inc.										
Savings From Peak (MW)	11.6	9.0	9.7	7.8	16.8	17.0	17.2	17.4	17.6	17.8
As Percentage of System Peak (%)	4.2	4.1	4.0	3.0	5.9	5.5	5.3	5.2	5.0	4.8
Energy Savings (MWh)	1,332.0	2,124.0	2,505.0	2,937.0	3,231.0	3,525.0	3,819.0	4,113.0	4,407.0	4,701.0
As Percentage of Total System Energ	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Electricity

System Totals by Cooperative

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Pee Dee Electric Cooperative, Inc.										
Savings From Peak (MW)	3.6	3.9	4.0	4.2	4.1	4.1	4.1	4.1	4.1	4.1
As Percentage of System Peak (%)	2.5	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.0
Energy Savings (MWh)	1,239.0	1,558.5	1,671.0	1,807.5	1,620.0	1,620.0	1,620.0	1,620.0	1,620.0	1,620.0
As Percentage of Total System Energ	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Santee Electric Cooperative, Inc.										
Savings From Peak (MW)	5.3	5.4	5.4	5.5	5.9	6.0	6.0	6.1	6.2	6.2
As Percentage of System Peak (%)	2.5	2.8	2.7	2.5	2.5	2.2	2.1	2.0	1.9	1.8
Energy Savings (MWh)	1,213.5	1,381.5	1,444.5	1,528.5	1,620.0	1,711.5	1,803.0	1,894.5	1,986.0	1,077.5
As Percentage of Total System Energ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Tri-County Electric Cooperative, Inc.										
Savings From Peak (MW)	1.6	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9
As Percentage of System Peak (%)	2.6	3.5	3.2	3.1	2.5	2.6	2.5	2.4	2.3	2.2
Energy Savings (MWh)	528.0	591.0	630.0	675.0	699.0	699.0	699.0	699.0	699.0	699.0
As Percentage of Total System Energ	0.2	0.3	0.3	0.3	0.3	0.2	0.4	0.2	0.2	0.2
Central Electric Power Cooperative System ***(includes the 15 preceding members)***										
Savings From Peak (MW)	81.0	71.4	73.8	71.2	100.4	101.0	101.7	102.3	103.0	103.7
As Percentage of System Peak (%)	3.9	3.9	3.8	3.4	4.4	4.3	4.2	4.1	3.9	3.8
Energy Savings (MWh)	25,806.0	31,678.5	34,159.5	36,868.5	37,651.5	38,595.0	39,538.5	40,482.0	41,425.5	41,369.0
As Percentage of Total System Energ	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Saluda River Electric Cooperative System										
Savings From Peak (MW)	29.9	32.4	33.0	41.4	43.2	46.2	49.1	52.1	55.0	58.0
As Percentage of System Peak (%)	6.3	6.6	6.3	7.2	6.8	6.9	6.9	6.9	6.9	6.9
Energy Savings (MWh)	125,433.8	134,454.8	144,124.5	165,795.8	177,521.5	189,247.3	200,973.0	212,698.8	224,424.5	236,150.3
As Percentage of Total System Energ	6.7	6.6	7.1	7.4	7.0	7.1	7.1	7.1	7.1	7.0
Total Cooperatives										
Savings From Peak (MW)	110.8	103.8	106.8	112.6	143.6	147.2	150.8	154.4	158.0	161.6
As Percentage of System Peak (%)	4.3	4.5	4.4	4.3	5.0	4.9	4.8	4.7	4.6	4.5
Energy Savings (MWh)	151,239.8	166,133.3	178,284.0	202,664.3	215,173.0	227,842.3	240,511.5	253,180.8	265,850.0	277,519.3
As Percentage of Total System Energ	1.5	1.6	1.6	1.8	1.7	1.8	1.8	1.8	1.8	1.8

Electricity

System Totals by Muncipalities

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Bamberg Board of Public Works										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Abbeville										
Savings From Peak (MW)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
As Percentage of System Peak (%)	2.1	2.0	2.1	2.0	1.8	1.9	1.9	1.9	1.9	1.8
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Bennettsville										
Savings From Peak (MW)	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
As Percentage of System Peak (%)	0.0	0.0	3.3	3.3	3.2	3.2	3.2	3.2	3.5	3.5
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Camden										
Savings From Peak (MW)	2.6	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.0	3.0
As Percentage of System Peak (%)	6.1	6.0	6.1	6.2	6.2	6.2	6.2	6.0	6.0	6.0
Energy Savings (MWh)	295.1	298.1	300.9	306.1	311.5	317.1	322.9	324.2	324.2	324.2
As Percentage of Total System Energy (%)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
City of Clinton										
Savings From Peak (MW)	1.2	1.3	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3
As Percentage of System Peak (%)	4.6	5.0	12.7	12.1	11.8	11.5	11.2	10.9	10.6	10.4
Energy Savings (MWh)	0.0	0.0	31.5	101.4	100.1	100.1	100.1	100.1	100.1	100.1
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
City of Georgetown										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Electricity

System Totals by Muncipalities

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
City of Newberry										
Savings From Peak (MW)	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
As Percentage of System Peak (%)	2.2	2.2	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Rock Hill										
Savings From Peak (MW)	12.6	12.3	12.8	14.5	14.5	15.0	15.4	15.8	16.2	16.6
As Percentage of System Peak (%)	10.2	9.4	9.4	10.0	9.8	9.7	9.6	9.6	9.5	9.5
Energy Savings (MWh)	592.0	781.3	785.0	640.8	602.0	665.0	680.0	695.0	710.0	725.0
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
City of Union										
Savings From Peak (MW)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
As Percentage of System Peak (%)	2.6	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Easley Combined Utility System										
Savings From Peak (MW)	5.0	5.8	6.2	6.3	6.5	6.6	6.8	7.0	7.2	7.3
As Percentage of System Peak (%)	9.9	11.1	11.1	10.7	10.2	9.9	9.6	9.3	9.0	8.7
Energy Savings (MWh)	202.4	207.2	223.6	236.8	254.4	267.5	283.8	301.1	319.4	338.9
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Gaffney Board of Public Works										
Savings From Peak (MW)	10.2	10.5	10.4	10.5	11.0	11.0	11.0	11.0	11.0	11.0
As Percentage of System Peak (%)	24.3	25.1	24.2	22.4	24.4	23.8	22.9	22.4	21.5	21.1
Energy Savings (MWh)	768.1	1081.1	1025.0	1079.0	836.9	836.9	836.9	836.9	836.9	836.9
As Percentage of Total System Energy (%)	0.4	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3
Greenwood Commission of Public Works										
Savings From Peak (MW)	2.6	2.4	2.2	2.8	2.8	3.0	3.1	3.2	3.3	3.3
As Percentage of System Peak (%)	4.6	4.3	3.7	4.5	4.4	4.8	4.8	5.1	5.2	5.2
Energy Savings (MWh)	26.8	24.5	21.8	28.8	29.0	31.0	31.5	33.5	34.5	34.5
As Percentage of Total System Energy (%)	0.0	0.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Electricity

System Totals by Muncipalities

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Greer Commission of Public Works										
Savings From Peak (MW)	2.4	2.5	2.7	1.5	1.6	1.6	1.6	1.6	1.6	1.6
As Percentage of System Peak (%)	5.8	6.1	5.9	3.1	3.1	3.0	2.9	2.7	2.6	2.5
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Laurens CPW										
Savings From Peak (MW)	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
As Percentage of System Peak (%)	1.3	1.6	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.6
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
McCormick Commission of Public Works										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Orangeburg Department of Public Utilities										
Savings From Peak (MW)	3.9	4.0	4.0	4.1	4.2	4.4	4.6	4.8	4.8	4.8
As Percentage of System Peak (%)	2.4	2.3	2.2	2.3	2.3	2.4	2.5	2.6	2.5	2.5
Energy Savings (MWh)	164.5	168.3	176.3	177.2	178.8	184.0	185.0	187.0	190.0	192.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seneca Light and Water Plant										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Town of Due West										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Electricity

System Totals by Muncipalities

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Town of Prosperity										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Town of Winnsboro										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Westminster Commission of Public Works										
Savings From Peak (MW)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
As Percentage of System Peak (%)	4.6	5.3	4.7	4.7	5.1	5.0	4.9	4.8	4.7	4.6
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Municipalities										
Savings From Peak (MW)	43.0	44.7	47.8	49.4	50.2	51.3	52.2	53.2	53.9	54.5
As Percentage of System Peak (%)	5.5	5.7	5.8	5.8	5.8	5.8	5.8	5.7	5.7	5.6
Energy Savings (MWh)	1,884.4	2,392.3	2,387.8	2,392.9	2,133.9	2,217.6	2,255.2	2,290.8	2,325.1	2,359.6
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05

Electricity

System Totals by Generating Utility

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Progress Energy										
Savings From Peak (MW)	190.511	165.758	152.044	137.255	143.812	145.827	146.284	146.75	147.225	147.71
As Percentage of System Peak (%)	16.7	14.6	11.5	9.7	10.5	10.4	10.1	9.9	9.6	9.4
Energy Savings (MWh)	199,930.0	34,216.0	20,410.9	21,200.5	21,776.0	22,362.8	22,961.4	23,571.8	24,194.4	24,829.3
As Percentage of Total System Energy (%)	3.0	0.5	0.3	0.3	0.30	0.30	0.30	0.30	0.30	0.30
Duke Power Company										
Savings From Peak (MW)	379.8	376.5	370.1	348.2	316.2	323.0	323.2	323.5	323.6	316.3
As Percentage of System Peak (%)	10.4	9.9	9.3	8.4	7.5	7.5	7.2	7.0	6.8	6.5
Energy Savings (MWh)	19,981.5	19,981.5	19,981.5	19,981.5	19,981.5	12,953.5	12,953.5	12,953.5	12,953.5	12,953.5
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.06	0.05	0.05	0.05
Lockhart Power Company										
Savings From Peak (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Santee Cooper										
Savings From Peak (MW)	13.7	16.2	18.4	20.2	21.3	22.1	23.0	23.8	24.6	25.5
As Percentage of System Peak (%)	1.3	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.4	1.4
Energy Savings (MWh)	11,470.5	13,387.8	14,927.8	16,407.3	17,155.3	17,882.4	18,630.3	19,378.3	20,126.2	20,874.2
As Percentage of Total System Energy (%)	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SC Electric & Gas Company										
Savings From Peak (MW)	20.4	3.9	1.4	1.4	1.2	1.2	1.2	1.2	1.2	1.2
As Percentage of System Peak (%)	0.6	0.1	0.0	0.0	0.03	0.03	0.03	0.03	0.03	0.03
Energy Savings (MWh)	14,135.2	8,266.9	4,221.7	6,689.3	6,015.4	6,015.4	6,015.4	6,015.4	6,015.4	6,015.4
As Percentage of Total System Energy (%)	0.1	0.0	0.0	0.0	0.03	0.03	0.27	0.03	0.03	0.03

Electricity

System Totals by Supplier

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total Cooperatives										
Savings From Peak (MW)	111	104	107	113	144	147	151	154	158	162
As Percentage of System Peak (%)	4.3	4.5	4.4	4.3	5.0	4.9	4.8	4.7	4.6	4.5
Energy Savings (MWh)	151,240	166,133	178,284	202,664	215,173	227,842	240,512	253,181	265,850	277,519
As Percentage of Total System Energy (%)	1.5	1.6	1.6	1.8	1.7	1.8	1.8	1.8	1.8	1.8
Total Municipalities										
Savings From Peak (MW)	43	45	48	49	50	51	52	53	54	55
As Percentage of System Peak (%)	5.5	5.7	5.8	5.8	5.8	5.8	5.8	5.7	5.7	5.6
Energy Savings (MWh)	1,884	2,392	2,388	2,393	2,134	2,218	2,255	2,291	2,325	2,360
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Progress Energy										
Savings From Peak (MW)	191	166	152	137	144	146	146	147	147	148
As Percentage of System Peak (%)	16.7	14.6	11.5	9.7	10.5	10.4	10.1	9.9	9.6	9.4
Energy Savings (MWh)	199,930	34,216	20,411	21,201	21,776	22,363	22,961	23,572	24,194	24,829
As Percentage of Total System Energy (%)	3.0	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Duke Power Company										
Savings From Peak (MW)	380	377	370	348	316	323	323	323	324	316
As Percentage of System Peak (%)	10.4	9.9	9.3	8.4	7.5	7.5	7.2	7.0	6.8	6.5
Energy Savings (MWh)	19,981	19,981	19,981	19,981	19,981	12,953	12,953	12,953	12,953	12,953
As Percentage of Total System Energy (%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Lockhart Power Company										
Savings From Peak (MW)	0	0	0	0	0	0	0	0	0	0
As Percentage of System Peak (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	0	0	0	0	0	0	0	0	0	0
As Percentage of Total System Energy (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Electricity

System Totals by Supplier

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Santee Cooper										
Savings From Peak (MW)	14	16	18	20	21	22	23	24	25	25
As Percentage of System Peak (%)	1.3	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.4	1.4
Energy Savings (MWh)	11,470	13,388	14,928	16,407	17,155	17,882	18,630	19,378	20,126	20,874
As Percentage of Total System Energy (%)	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SC Electric & Gas Company										
Savings From Peak (MW)	20	4	1	1	1	1	1	1	1	1
As Percentage of System Peak (%)	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy Savings (MWh)	14,135	8,267	4,222	6,689	6,015	6,015	6,015	6,015	6,015	6,015
As Percentage of Total System Energy (%)	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Electricity

Qualified Producers in South Carolina

Cogeneration and Renewable Fuels	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Energy (MWh)	730,930.2	717,772.4	1,092,713.0	1,317,028.9	1,273,118.6	1,436,984.9	1,437,017.9	1,437,050.8	1,437,085.7	1,437,120.7

APPENDIX J
Form to Report Demand-Side Activities

Following is the form sent to the utilities by the South Carolina Energy Office to obtain information on demand-side activities.

Reporting Demand-Side Activities

to the

South Carolina Energy Office

[Pursuant to Section 58-37-30(B) of South Carolina Code]

QUANTITATIVE DATA:

1. Please use the attached forms to provide quantitative data on demand-side activities. The reporting period includes actual data for 1996 through 2000 and projected values for 2001 through 2005.

2. If you have no demand-side management activities, please indicate this on the forms and return. We still need data on your customer base and system size.

NOTE: The quantitative data may be submitted as a LOTUS 1-2-3 or Microsoft EXCEL spreadsheet on a DOS-formatted diskette.

QUALITATIVE DATA:

1. Provide summary descriptions of each demand-side activity identified in this year's report.

2. Please attach any additional explanatory information you want included in this report.

If you would like a copy of the 2000 report, *The Status of Utility Demand-Side Management Activities in South Carolina for 1999*, or a copy of the data you filed last year, please contact Kate Billing at the South Carolina Energy Office. Call 1-800-851-8899, or (803) 737-8034.

Demand-Side Activities Form 1

Data for Each Demand-Side Activity

Quantitative Data-- Name: _____

Provide system summary totals for 12-month periods (on a calendar year basis):

* using actual, or estimated actual, annual values for each of the previous five calendar years, January 1996 through December 2000;

* using projected annual values (using most probable economic assumptions with normal weather) for each of the next five calendar years, January 2001 through December 2005;

* and providing the following data:

	DATA DESCRIPTION	ACTUAL 1996	1997	1998	1999	2000	PROJECTED 2001	2002	2003	2004	2005
DEMAND-SIDE ACTIVITY NAME:	(1) Total kW saved, or avoided, from annual peak for this demand-side activity.										
	(2) Total kWh saved, or avoided, from overall annual usage for this demand-side activity.										
CUSTOMER CLASS:	(3) Proportion of total customers in class (%) for whom this demand-side activity is available.										
	(4) Number of customers participating in this demand-side activity.										
DEMAND-SIDE ACTIVITY NAME:	(1) Total kW saved, or avoided, from annual peak for this demand-side activity.										
	(2)Total kWh saved, or avoided, from overall annual usage for this demand-side activity.										
CUSTOMER CLASS:	(3) Proportion of total customers in class (%) for whom this demand-side activity is available.										
	(4) Number of customers participating in this demand side-activity.										

Demand-Side Activities

Form 2

Overall System Data

Quantitative Data--

Name: _____

Provide system summary totals for 12-month periods (on a calendar year basis):

* using actual, or estimated actual, annual values for each of the previous five calendar years, January 1996 through December 2000;

* using projected annual values (using most probable economic assumptions with normal weather) for each of the next five calendar years, January 2001 through December 2005;

* and providing the following data:

DATA DESCRIPTION	ACTUAL					PROJECTED				
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
(5) Annual MW peak system demand, excluding sales for re-sale (for projections, show expected values already reduced by demand-side effects).										
(6) Total annual system MWh, excluding sales for re-sale (for projections, show expected values already reduced by demand-side effects).										
(7) Total miles of distribution line in service area (in miles).										
(8) Total number of customers (all classes).										
(9) Total generation (kWh) supplied from qualified producers (IPP, cogeneration) or avoided due to their operation (NOTE: attach a list showing the identity and generating capacity of each qualified producer in the system).										

Natural Gas Demand-Side Activities Form 1

Data for Each Demand-Side Activity

Quantitative Data-- Name: _____

Provide system summary totals for 12-month periods (on a calendar year basis):

* using actual, or estimated actual, annual values for each of the previous five calendar years, January 1996 through December 2000;

* using projected annual values (using most probable economic assumptions with normal weather) for each of the next five calendar years, January 2001 through December 2005;

* and providing the following data:

		ACTUAL					PROJECTED				
	DATA DESCRIPTION	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
DEMAND-SIDE ACTIVITY NAME:	(1) Total therms or dekatherms saved, or avoided, from annual peak for this demand-side activity.										
	(2) Total therms or dekatherms saved, or avoided, from overall annual usage for this demand-side activity.										
CUSTOMER CLASS:	(3) Proportion of total customers in class (%) for whom this demand-side activity is available.										
	(4) Number of customers participating in this demand-side activity.										
DEMAND-SIDE ACTIVITY NAME:	(1) Total therms or dekatherms saved, or avoided, from annual peak for this demand-side activity.										
	(2) Total therms or dekatherms saved, or avoided, from overall annual usage for this demand-side activity.										
CUSTOMER CLASS:	(3) Proportion of total customers in class (%) for whom this demand-side activity is available.										
	(4) Number of customers participating in this demand side-activity.										

Natural Gas Demand-Side Activities Form 2

Overall System Data

Quantitative Data-- Name: _____

Provide system summary totals for 12-month periods (on a calendar year basis):

* using actual, or estimated actual, annual values for each of the previous five calendar years, January 1996 through December 2000;

* using projected annual values (using most probable economic assumptions with normal weather) for each of the next five calendar years, January 2001 through December 2005;

* and providing the following data:

DATA DESCRIPTION	ACTUAL					PROJECTED				
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
(5) Annual DT peak system demand, excluding sales for re-sale (for projections, show expected values already reduced by demand-side effects).										
(6) Total annual system DT, excluding sales for re-sale (for projections, show expected values already reduced by demand-side effects).										
(7) Total miles of distribution line in service area (in miles).										
(8) Total number of customers (all classes).										